

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
31 March 2005 (31.03.2005)

PCT

(10) International Publication Number
WO 2005/028432 A1

(51) International Patent Classification⁷: **C07C 381/00**,
233/00, C08G 69/44, 73/06

(21) International Application Number:
PCT/US2004/029384

(22) International Filing Date:
10 September 2004 (10.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/502,800 12 September 2003 (12.09.2003) US

(71) Applicant (for all designated States except US): **DENDRITIC NANOTECHNOLOGIES, INC.** [US/US];
2625 Dension Drive Suite B, Mt. Pleasant, MI 48858 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TOMALIA, Donald, A.** [US/US]; 463 West Chippewa Road, Midland, MI 48640 (US). **SWANSON, Douglas, R.** [US/US]; 2915 Billbrael, Mt. Pleasant, MI 48858 (US).

(74) Agent: **KIMBLE, Karen**; Technology Law, PLLC, 3595 North Sunset Way, Sanford, MI 48657 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i)) for all designations
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **HYPERBRANCHED (PAMAM) POLYMERS VIA A ONE POT PROCESS**

(57) Abstract: Methods of providing hyperbranched polymers by polymerization of appropriate AB₂ monomers derived from the reaction of tris-(2-aminoethyl) amine and various other materials, namely, succinic anhydride, methyl acrylate, and dimethyl itaconate.

WO 2005/028432 A1